The Impact of Work-to-Family Conflict on Work Domain: A Meta-Analysis

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***Abstract*—Meta-analysis is used in this paper for revealing universal law of how does work-to-family conflict (WFC) influence work domain in both terms of employees' emotion and behavior. Quantitative model is establish by using 171 highly relevant empirical studies from 2014 to 2018. The results show that, WFC has a strong correlation with employees' emotion, such as work stress, job satisfaction, job burnout, psychological distress and turnover intention. As for employees' behavior, WFC has strong correlation with counterproductive work behavior. This conclusion provides theoretical support for enterprise managers to pay attention to WFC from perspective of organizational management.**

***Index Terms*—work-to-family conflict, mate-analysis, employees' emotion and behavior**

I. Introduction

Work-to-family conflict is an important issue that employees have to face in their work and life. If they do not coordinate well, the conflict would have a great negative impact on employees' work. With the development of society, the popularization of network and the intensification of competition, employee's family structure, work style and work intensity have changed dramatically. The boundaries between work and family are increasingly blurred, and work-family conflict is increasingly prominent. The study on WFC impact has always been a hot research topic. Literatures on the impact of WFC on work domain has shown a trend of explosive growth in recent decades. However, these studies are scattered, not systematic enough, and the data backgrounds is different, so the conclusions are not the same.

Meta-analysis is to obtain mean effect size through quantitative analysis of multiple independent studies, so as to solve the problem of inconsistent conclusions of these independent studies. In order to reveal universal law of how does WFC influence work domain in both terms of employees' emotion and behavior, this paper uses meta-analysis method to establish a quantitative model, using 170 highly relevant empirical studies from 2014 to 2018.

II. Hypotheses Development

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Work-to-family conflict (WFC) is one of the dimensions of work-family conflict, refers to the impact of work roles on family life. That is, it is impossible to perform family responsibilities well in non-working hours due to work reasons. The impact of WFC on work domain could be analyzed from two aspects: employees' emotion and behavior. The former has always been a research hotspot, and there are many empirical studies, while the latter has only gradually gained attention in recent years.

A. WFC and Employees' Emotion

The impact of WFC on employees' emotion is mainly displayed in 7 variables, including work stress, job satisfaction, job burnout, psychological distress, turnover intention, organizational commitment and perceived organizational support.

Work stress (WS) is defined as the reaction to work demands and resources that include mentally and physically threatening.[1] WFC would occur when employees run out of resources in work roles and cannot take on family responsibilities, making they have negative attitude toward work roles.[2] Such a negative state would make employees doubt their own ability and then experience greater work stress.[3] High-intensity job demands tend to lead to WFC, which further lead to work stress of employees. Thus, the hypothesis was proposed as:

H1: WFC is positively related to WS.

Job satisfaction (JS) is defined as positive emotional state resulting from employee' evaluation of his/her job.[4] Simply described, it is the degree to which employees like their job. Employees who undergo WFC tend to have negative evaluation on their work, which may affect job performance, work remuneration and rewards, ultimately leading to reduction of job satisfaction. Some studies show that the main reason why WFC lead to the decrease of job satisfaction is that WFC can significantly affect employees' perception of their own work.[5] Thus, this study hypothesized that:

H2: WFC is negatively related to JS.

Job burnout (JB) refer to a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment.[6] Job burnout is a serious result caused by increased WFC that employees expose in demanding work environments.[7] Employees experiencing WFC need to pay extra resources to balance work and family domains, which would further lead to emotional

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exhaustion and depersonalization. At the same time, negative emotions caused by WFC also make employees more prone to self-denial, that is, reduced personal accomplishment. Thus, this study hypothesized that:

H3: WFC is positively related to JB.

Psychological distress (PD) refers to negative state of mental health characterized by symptoms of anxiety and depression. Depression symptoms is characterized by a significant and persistent state of low mood, such as depression to grief and even pessimism. This paper unifies the two into a relational study. WFC would increase psychological distress and the risk of depression among employees in multiple industries due to high-intensity work arrangements (such as shift work and overtime work) and psychological work stressors (such as workload and time pressure).[8] This study proposed that:

H4: WFC is positively related to PD.

Turnover intention (TI) is the willingness of employees to find other new job opportunities in the near future.[9] Employees tend to find a new job when employees work in the environment in conflict with family environment. Because family environment often cannot be easily changed or costly to change. Besides, excessive demands or insufficient resources in a particular role lead to a negative attitude towards the role, so employees suffering WFC more tend to consider leaving the organization to protect their scarce resources.[7] In conclusion, this study hypothesized that:

H5: WFC is positively related to TI.

Organizational commitment (OC) is defined as the strength of employees' identification and psychological attachment to a particular organization.[10] Farradinna & Halim suggested imbalance demands and duties of work and family domain were the cause of lack of organizational commitment.[11] Employees who experience WFC tend to evaluate negatively their job, thus decreasing their emotional attachment to organization, that is, low organizational commitment. In conclusion, this study hypothesized that:

H6: WFC is negatively related to OC.

Perceived organizational support (POS) is the extent to which employees feel that organizations value their contributions and care about their well-being.[12]. POS is also considered as the benefits that employees think they can get from organization (such as supervisor support, organizational rewards and working conditions). If employees are unable to build, protect, and retain resources at work, they may experience more WFC and blame organization for a lack of support.[13] As such, the hypothesis was developed:

H7: WFC is negatively related to POS.

B. WFC and Employees' Behavior

The impact of WFC on employees' behavior of work domain mainly include the following four variables: work engagement, organizational citizenship behavior and counterproductive work behavior.

Work engagement (WE) is regarded as an indicator of personal resources employees bring to organization.[14] Work-related ideas invading family domain would lead to strongly WFC, which is harmful to employees' mental state, so that they could not remain focused.[15] WFC caused by excessive consumption of work resources and failure to recover in time will reduce employees' dedication to organization, that is, reduced work engagement.[10] Therefore, this study hypothesize that:

H8: WFC is negatively related to WE.

Organizational citizenship behavior (OCB) refers to proactive and extra-role behavior of employees, which is positively contributes to organization.[16] Resource depletion caused by WFC may cause employees to enter resource conservation mode, thus reducing additional resource input for OCB.[17] Similarly, WFC may lead to negative feedback from employees on their work, making employees unwilling to invest their resources into organization, especially in terms of OCB.[18] Thus, this study hypothesized that:

H9: WFC is negatively related to OCB.

Counterproductive work behavior (CWB) is defined as behavior that employees act with the intent to harm or act resulting in harm to organization, colleagues or customers.[19] WFC caused by high job demands would represent a sign of resource depletion, and then employees would engage in CWB because they lack the energy/resources necessary to effectively perform in-role behaviors and fulfill responsibility.[20] Thus, this study hypothesized that:

H10: WFC is positively related to CWB.

Combining all above hypotheses, this meta-analysis proposed the following ten relationships (see Fig. 1).

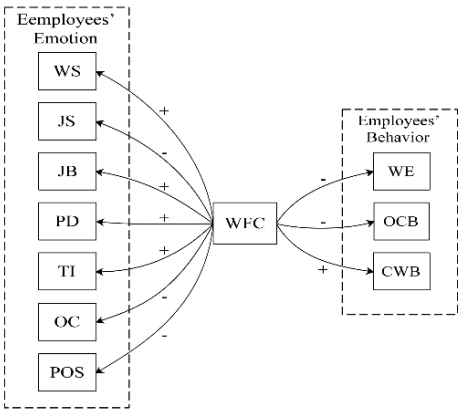

Figure 1. The hypothesized relationships between WFC and its outcomes variables in work domain

Note: WFC: work-to-family conflict; WS: work stress; JS: job satisfaction; JB: job burnout; PD: psychological distress; TI: turnover intention; OC: organizational commitment; POS: perceived organizational support; WE: work engagement; OCB: organizational citizenship behavior; CWB: counterproductive work behavior.

III. Data Collection and Analysis

A. Data Collection

Since 2014, a large number of researches on the impact of WFC on work domain have emerged, laying a foundation for the adoption of meta-analysis. This paper identified and code relevant literature published during 2014-2018. Computer keyword search was conducted by using Scopus and Web of Science database with

following keywords: work-to-family conflict, work-family conflict, work-family interference, work-family imbalance etc. Besides, this meta-analysis inspected the reference lists of included studies to identify more articles.

Inclusion criteria were as following: First, the studies are published and in English. Second, studies should assess WFC in a direction-specific way. Third, studies should assess at least one consequence in work domain and report the impact of WFC on consequence in work domain. Four, studies should report specific information to compute effect sizes, such as correlation coefficient. Finally, studies using the same dataset should be screened. Only studies more representative would been included to prevent overrepresentation, such as larger samples. A total of 188 sample groups (N) from 170 literatures (L) comprising 128569 employees (n) were included in sample database, and 307 correlation coefficients (k) were reported.

Included Studies were coded as showed in Table 1. Mean and median/mode of the items, sample percentage and interrater reliability were also coded. Sample percentage refers to the proportion of accumulative sample size of literatures reporting a certain information to total sample size (128569). The higher sample percentage, the higher reliability. Interrater reliabilities are all within the expected range (i $\geqslant$ 95%). All inconsistent items were discussed until agreement was reached.

TABLE I. CHARACTERISTICS OF CODING ITEMS REPORTED BY INCLUDED STUDIES

Variables	Central Tendency		Max	Min	Sample Percentage (n%)	Interrater Reliability (%)
	Mean	Median/Mode				
Source						
Publication year	2016	2016	2018	2014	100	100
Type of publication	—	Journal	—	—	100	100
Design						
Cross-sectional vs. longitudinal	—	Cross-sectional	—	—	100	100
Sample						
Sample size (n)	684	329	6230	69	100	99.84
Country or region	—	the United States	—	—	100	100
Type of job	—	Multiple industries/ occupations	—	—	100	97.41
Female (%)	55.24	55.00	100	0	88.41	99.84
Mean age (years)	38.68	39.00	53.63	25	66.18	99.49
Valid participation rate (%)	60.36	63.57	99.00	0.18	58.77	99.84
Married/long relationship (%)	70.75	69.70	100	21.67	41.27	100
With children (%)	58.06	55.30	100	15.20	25.19	100
Organizational tenure (years)	9.99	8.70	25.7	1.37	21.39	99.84
Mean work time (hours per week)	41.12	40.68	50.97	33.5	11.97	100
Full-time workers (%)	82.21	87.00	100	0	10.80	100
Single parents (%)	6.46	6.30	13.00	0.50	4.61	100
WFC						
Direction of conflict (WFC vs both direction)	—	WFC	—	—	100	100
Measure instrument used	—	Questionnaire	—	—	100	100
Reliability for WFC's scale	0.860	0.870	1	0.60	100	100
Outcomes						
Type of outcome	—	Job satisfaction	—	—	100	100
Measure instrument used	—	Questionnaire	—	—	100	100
Reliability for outcomes' scale	—	—	—	—	—	100
Effect size						
Type of effect size	—	Correlation	—	—	100	100
Effect size	—	—	—	—	100	100

B. Descriptive Analysis

Since some literatures studied multiple sample groups, the number of sample groups (N) was used to replace the number of literatures (L) for feature analysis. Most studies were published in Journals (N%=97.34%). 119 journals were involved, and most of them belongs to SSCI/SCI Indexes (N%=68.07%). Most studies were published in 2016 (N%=25.4%), followed by 2018 (N%=22.22%). Most studies were cross-sectional (N%=82.54%). The average sample size of 188 sample groups was 684. 179 sample groups clearly reported sample's countries/regions, covering 41 countries and regions, of which 39 sample groups were studied under the background of the United States (21.79%) and 36 sample groups were under of China (20.11%). While previous meta-studies were mostly based on western sample groups. Sample groups with mixed countries or regions (such as European countries and fortune 500 companies) were not included in the above counts. This paper did not restrict industry. Industry backgrounds of this meta-analysis included multiple industries/occupations, corporate employees, healthcare workers, educators, and social workers etc.

Studies reported other coding terms for sample characteristics, such as female participation rate, average age, married/long-term relationships and so on, as shown

in Table I. Questionnaires were used to measure all variables. Among all outcome variables, most studied by scholars is job satisfaction, with 62 of 307 effect sizes. All effect sizes were coded as correlation coefficients.

IV. Analysis Results

The meta-analysis followed the procedures of Schmidt & Hunter[21], using Schmidt & Le Excel Macro to calculate mean effect size based on random effects models. Reliability-corrected effect size (mean ρ) and 95%CI were reported as presented in Table II. 95% CI reflect the accuracy of parameter estimation and is used to test the significance of effect size estimation. When 95%CI interval do not contain zero, it can be inferred that there is a significant correlation between WFC and outcome variable.

Mean ρ in Table II showed that the direction of relationships were consistent with expected hypothesis. However, negative correlations between WFC and OC, WFC and POS were not significant in terms of employees' emotion. Negative correlations between WFC and OCB, WFC and WE were not significant in terms of employees' behavior. In addition, the relationships between WFC and other variables in work domain were significant. Therefore, H1, H2, H3, H4, H5 and H10 were supported, but H6, H7, H8 and H9 were rejected.

TABLE II. Results of the Meta-Analysis for WFC and Outcome Variables in Work Domain

Variables	k	N	mean ρ	SD ρ	95% CI
Employees' Emotion					
JS	62	44589	-0.297	0.205	[-0.349, -0.245]
JB	58	33592	0.528	0.168	[0.484, 0.572]
WS	40	28937	0.475	0.131	[0.433, 0.516]
PD	33	31807	0.363	0.304	[0.259, 0.467]
TI	31	17406	0.359	0.131	[0.311, 0.407]
OC	23	11191	-0.103	0.266	[-0.213, 0.007]
POS	9	3482	-0.131	0.293	[-0.325, 0.064]
Employees' Behavior					
OCB	23	14253	-0.005	0.243	[-0.106, 0.095]
WE	14	8133	-0.042	0.314	[-0.208, 0.124]
CWB	14	4865	0.309	0.133	[0.234, 0.383]

V. Conclusion

WFC has been widely concerned by scholars and managers in the past 20 years, becoming an important issue for both employees and enterprises. WFC would continue to pose challenges in the coming decades. This meta-analysis quantitatively summarizes the impact of WFC on work domain from the employees' emotion and behavior to find the more general impact rules of WFC.

In summary, the meta-analysis demonstrated WFC has strong impact on multiple outcomes in work domain. Since employees cannot separate from work environment for a long time, exhaustion of resources would cause high work stress of employees. Besides, Job burnout is a psychological syndrome caused by employees' long-term exposure to high-pressure working environment. The occurrence of WFC makes employees further consume resources to balance the demands of different domains, which aggravates psychological distress of employees. Furthermore, WFC would increase turnover intention of employees. When confronted with fierce WFC, employees would try to escape from such a high-intensity work environment to rebalance work and family domains. Employees would be disgusted with their jobs, resulting in lower job satisfaction when job demands infringe on family responsibilities. However, most of sample groups are front-line workers. They tend to attribute WFC to immediate boss, team, intrinsic nature of work, even their own abilities, while are less likely to take a negative attitude to organization. This may be the reasons why correlations between WFC and OC, POS are non-significant in this meta-analysis.

While this attribution situation would trigger employee reactions such as absenteeism, verbal attacks to colleagues and other CWB. It is not supported that WFC is negatively related with WE. There were few existing studies on this relationship. Besides, some scholars believed sacrificing non-working hours to make more time available to work might enable employees to focus on completing work tasks.[22] OCB often require employees to have a higher level of overall quality. Sometimes, employees do not necessarily put in extra effort to perform OCB even if they do not suffer from WFC. Moreover, some scholars have pointed out that there are specific mediating and moderating variables between WFC and OCB, resulting in insignificant direct relationship.[23]

This paper point out that the influence of WFC not only needs to focus on employees' emotion, but also needs to consider employees' behavior. Work design such as overtime and shift may do not necessarily bring higher benefits to organization. Instead, it is in the long-term interest of both employee and organization to develop a friendly strategy that promotes the reduction of conflict and balances demands of work and family domain.[23] At the same time, managers need to strengthen signals released by organization to create a work-family friendly atmosphere so that employees can fully feel strong organizational support.[24]

There are some limitations to this meta-analysis. First, this meta-analysis do not take into account the effects of time because most studies on WFC are cross-sectional design. Future studies may attempt to consider longitudinal design for variables that may be affected by time, such as work stress. Besides, meta-analysis is based on correlational coefficient, so future research might need to combine with empirical study to test causal. Finally, someone's emotion often affects his/her behaviors. Considering the mediating effect of employees' emotion on WFC and employees' behavior may be a research direction to be concerned in the future.

Conflict of Interest

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Na Li, Jinfeng She and Shuang Dong co-conducted the research; Jinfeng She and Shuang Dong provided some excellent references; Na Li collected and analyzed data and wrote the paper; the three revised the papers; all authors had approved the final version.

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